4.10 TRANSPORTATION AND CIRCULATION

The following section describes the transportation and circulation impacts associated with implementation of the project. The results of this analysis are based on a revised Transportation Impact Analysis (July 2006) and Neighborhood Impact Analysis (September 2005) prepared by Fehr & Peers, which are included in Appendix J and K respectively. This analysis has been prepared consistent with the requirements of Santa Clara Valley Transportation Authority (VTA). The project site is not located near an airport and would not change existing air traffic patterns. Therefore, this issue is not addressed further in this DEIR.

4.10.1 ENVIRONMENTAL SETTING

SITE DESCRIPTION

The project site is located in the City of Santa Clara, on North Winchester Boulevard (Exhibit 4-9). Regional access to the project site is provided by Interstate 280 (I-280), Interstate 880 (I-880), State Route 17 (SR 17), and San Tomas Expressway. Primary local access to the site is provided by Winchester Boulevard, Stevens Creek Boulevard, Pruneridge Avenue, and Forest Avenue. Detailed descriptions of the key roadway facilities are presented below.

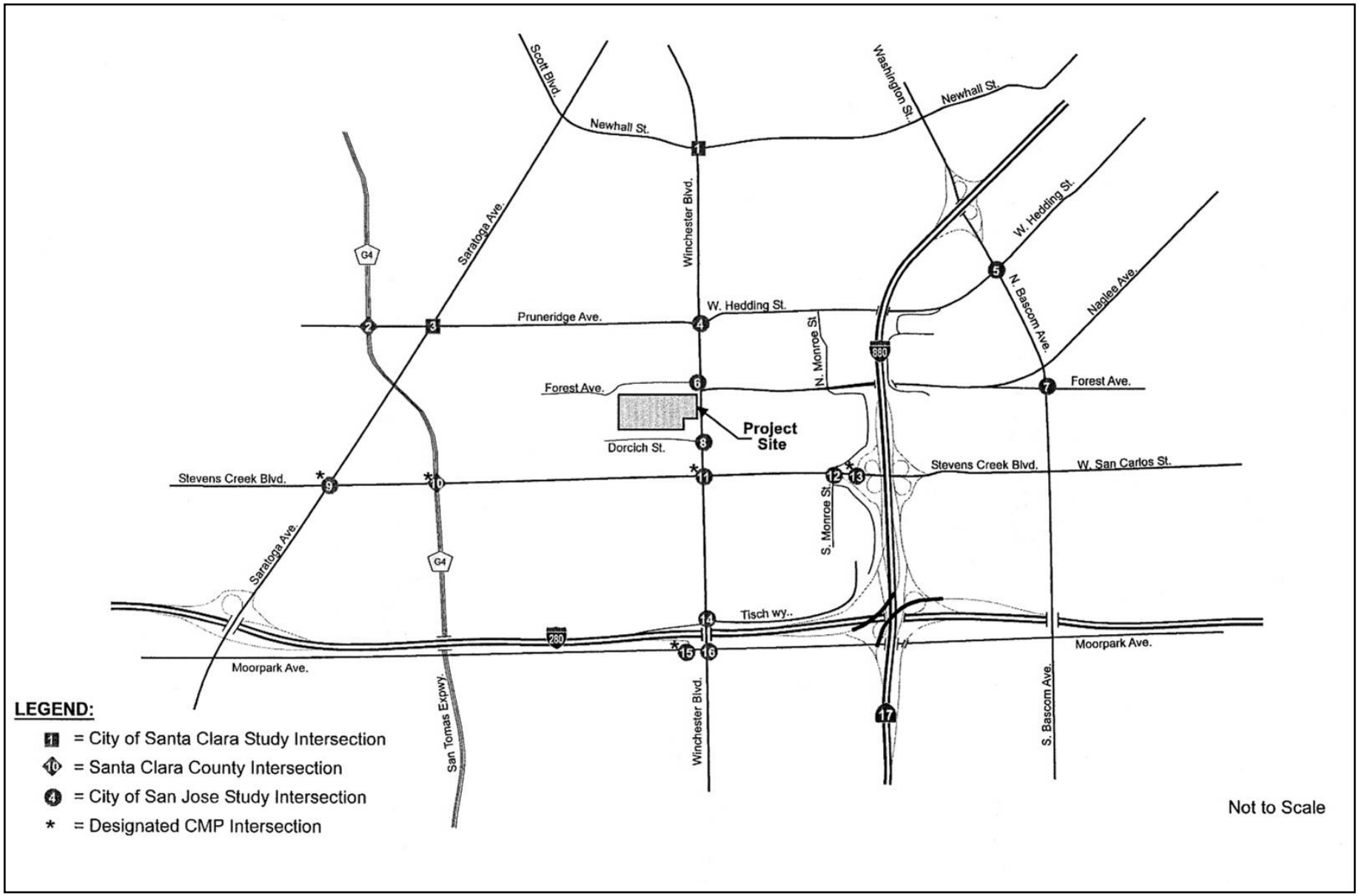
Freeways and Highways

I-280 is generally a north/south, eight-lane freeway that connects San Francisco with I-680 in San Jose. In the project area, it is oriented in an east/west direction. Between I-880 and the San Mateo County line, this freeway has three mixed-flow lanes and one high-occupancy vehicle (HOV) lane in each direction. Between I-880 and I-680, there are no HOV lanes and the cross section varies from eight to ten lanes. Access to and from the project site is provided via the I-280 ramps at Winchester Boulevard and Moorpark Avenue and via Stevens Creek Boulevard and the I-880/I-280 interchange.

I-880 is a north-south, four- to eight-lane freeway. This freeway extends from San Jose to Oakland. In the project area, I-880 has six lanes (three in each direction). Access to the site is provided by Bascom Avenue and Stevens Creek Boulevard interchanges.

SR 17 is a four-to eight lane highway that runs in a north-south direction from San Jose to Santa Cruz. State Route 17, between I-280 and Hamilton Avenue, is a freeway with four mixed-flow lanes in each direction.

San Tomas Expressway is a six-lane, limited access roadway that extends south from US 101 through Santa Clara and San Jose to SR 17. In the study area, one lane in the peak commute direction (northbound in the morning and southbound in the evening) is restricted to high occupancy vehicles (including carpools, buses, and motorcycles) during commute periods. Major intersections on San Tomas Expressway in the study area are signalized.



Source: Fehr & Peers 06/04

Site Location

EXHIBIT 4-9

Collectors and Local Roadways

Winchester Boulevard is a four- to six-lane north/south arterial street that extends from Santa Clara south to Los Gatos. Along the project frontage, Winchester Boulevard has four travel lanes (two in each direction) plus a center lane for left turns. Direct access to the project site is provided via one driveway on Winchester Boulevard at the northeastern corner of the project site.

Stevens Creek Boulevard is a four- to six-lane east/west arterial located south of the project site. It extends eastward from Cupertino, where its name changes to West San Carlos Street at the intersection with Bascom Avenue, and continues east through downtown San Jose.

Forest Avenue is a two- and four-lane east/west roadway located just north of the project site. Forest Avenue is a four-lane east/west roadway east of the project site. Forest Avenue extends east from Parkway Park on San Tomas Expressway to Bascom Avenue in San Jose, where its name changes to Naglee Avenue. Forest Avenue provides rear access to Valley Fair Mall.

Pruneridge Avenue is a four-lane, east/west street located north of the project site. It extends east from Wolfe Road in Cupertino, where its name changes to Hedding Street at the intersection with Winchester Boulevard, and continues east to in San Jose.

Parking

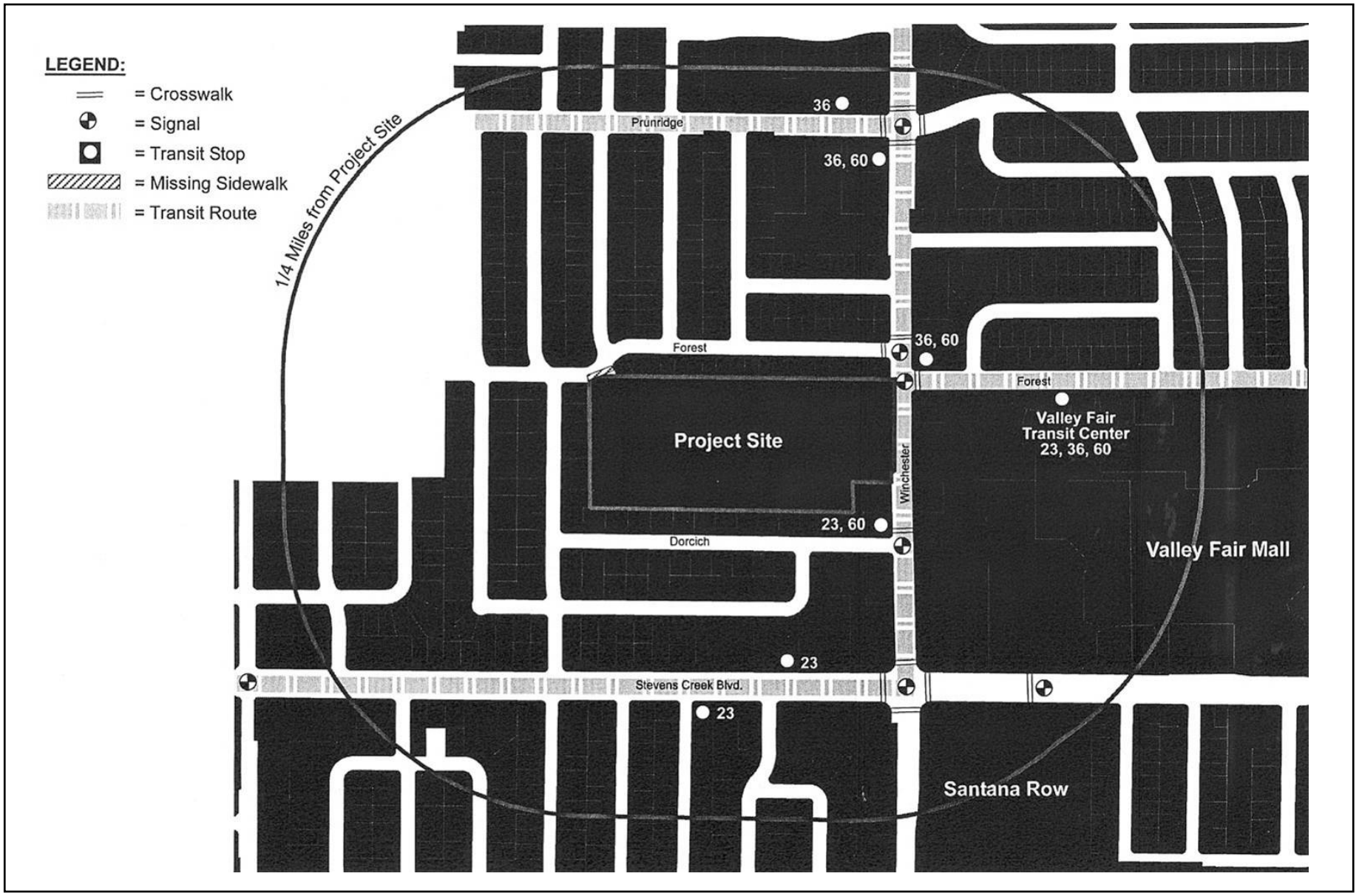
Approximately 20 onsite parking spaces are located near the entrance to the project site adjacent to the office/laboratory building. On-street parking is not available along North Winchester Boulevard. The parking spaces would be demolished before project construction.

Public Transportation

The VTA operates fixed route, commuter, and paratransit bus service and light rail transit service (LRT) in Santa Clara County. The existing transit facilities in the vicinity of the site are show in Exhibit 4-10. Three fixed routes operate within ¼ mile of the project site: routes 23, 36, and 60. Detailed service descriptions of these routes are provided below. The closest bus stop is located on Winchester Boulevard near the Office of Veteran's Affairs building. The Valley Fair Transit Center is located across Winchester Boulevard behind the Nordstrom's department store at Valley Fair Mall.

Route 23 provides daily bus service between downtown San Jose and the San Antonio Shopping Center in Mountain View. Near the project site, Route 23 operates on Stevens Creek Boulevard, Winchester Boulevard, and Forest Avenue. Service is provided between 5 a.m. and 1 a.m. on weekdays on 15- to 30-minute headways. Weekend service is provided between 6 a.m. and 1 a.m. on 15- to 30-minute headways. Route 23 connects with light rail service in downtown San Jose.

Route 36 provides fixed-route service on Pruneridge Avenue, Winchester Boulevard, and Forest Avenue. The route operates between Vallco Fashion Park in Cupertino and east San



Source: Fehr & Peers 06/04

Transit and Pedestrian Facilities

EXHIBIT 4-10

Santa Clara Gardens Development Project Recirculated Draft EIR

G 3T008.01 06/04

NORTH

EDAW

Jose. Service is provided between 6 a.m. and 7 p.m. on weekdays on 30- to 60-minute headways. Weekend service is provided between 8 a.m. and 7:30 a.m. on 30- to 60-minute headways. Route 36 connects with light rail service at the San Jose Civic Center.

Route 60 provides daily fixed-route service between the Old Ironsides Light-duty Rail Transit (LRT) Station and Great America Amusement Park in Santa Clara and the Civic Center in Los Gatos. In the project vicinity, this route operates on Winchester Boulevard and Forest Avenue. Service is provided between 5:30 a.m. and 11 p.m. on weekdays on 15- to 30-minute headways. Weekend service is provided between 6:30 a.m. and 9:30 p.m. on 30- to 60-minute headways. Route 60 connects with Caltrain and light rail service at the Santa Clara Caltrain Station and the Old Ironsides LRT Station.

Pedestrian and Bicycle Facilities

Pedestrian facilities include sidewalks, crosswalks, and pedestrian signals. In the project vicinity, sidewalks are located on the both sides of Winchester Boulevard, Forest Avenue, and neighborhood streets (Exhibit 4-10). Sidewalks in the project vicinity are in good condition and meet American with Disabilities Act (ADA) standards. Some sidewalks lead to the northwest corner of the project site; there is a short segment adjacent to the site where a sidewalk is currently not provided. Crosswalks, wheelchair ramps, and pedestrian signals are provided at the signalized intersections near the site.

Pedestrian access from the northern portion of the project site to the Valley Fair Transit Center (across Winchester Boulevard) is circuitous because of the location of existing pedestrian facilities (northern leg of Forest Avenue/Winchester Boulevard intersection). Pedestrians have to walk to the northern Forest Avenue/Winchester Boulevard intersection (the Forest Avenue/Winchester Boulevard intersection is offset by about 80 feet) and cross north using Forest Avenue and then east across Winchester Boulevard using the marked crosswalks and the pedestrian signals, south along the east side of Winchester Boulevard and then east on Forest Avenue to the Transit Center. A second crosswalk is located at Dorcich Street and Winchester Boulevard immediately south of the project site. These paths are illustrated on Exhibit 4-10.

Bicycle facilities include bike paths (Class I), lanes (Class II), and routes (Class III). Bike paths are paved trails that are separated from roadways. Bike lanes are lanes on roadways designated for bicycle use by striping, pavement legends, and signs. Bike routes are roadways designated with signs for bicycle use only. In the project area, the City of Santa Clara maintains undesignated bicycle facilities along Stevens Creek Boulevard, Winchester Boulevard, and Forest Avenue. These bikeways are not marked with striping or signs and assume the shared use of the roadways with motor vehicles. Stevens Creek Boulevard and Winchester Boulevard are rated for cyclists to use with 'extreme caution' and Forest Avenue is rated as cyclists 'alert'. No designated bicycle facilities are provided within ¼ mile of the project site.

REGULATORY SETTING

County of Santa Clara Roads and Airports Department

The County of Santa Clara Roads and Airports Department is responsible for the operation and maintenance of the expressways and roads in its jurisdiction.

City of Santa Clara General Plan

The goal of the Transportation Element of the City's General Plan, is to provide a safe and convenient integrated transportation system that is efficient and cost effective. The Transportation Element provides policies and programs for roadways, highways, transportation demand management, bus and rail systems, sidewalks, bikeways, and trails.

Impacts at non-Congestion Management Program (CMP) (see description below) signalized intersections occur when the addition of project traffic causes:

- intersection operations to change from an acceptable level (Level of Service [LOS] D or better) under background conditions to an unacceptable level (LOS E or F), or
- exacerbation of unacceptable operations (LOS E or F) by increasing the critical delay by four or more seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more, or
- an increase in the V/C ratio by 0.01 or more when the change in critical delay is negative at an intersection projected to operate unacceptably under background and project conditions.

City of San Jose 2020 General Plan

The San Jose 2020 General Plan (as amended through April 15, 2003) is the City's official policy regarding its future character and quality of development. City of San Jose transportation goals aim to provide a safe, efficient, and environmentally sensitive transportation system. Transportation policies have been developed for thoroughfares, impacts on local neighborhoods, transit and pedestrian facilities, transportation systems management/transportation demand management, truck facilities, parking, rail, aviation, and bicycling (San Jose 2003).

Significant traffic impacts at signalized intersections located in the City of San Jose (CMP and local intersections) would occur when the addition of project traffic causes:

- operations to deteriorate from LOS D or better under background conditions to LOS E or F under project conditions, or
- exacerbation of unacceptable operations (LOS E or F) by increasing the critical delay by 4 seconds or more and increasing the V/C ratio by 0.01 or more, or
- an increase in the V/C ratio by 0.01 or more when the change in critical delay is negative at an intersection projected to operate unacceptably under background and project conditions.

Santa Clara County Congestion Management Program

Proposition 111 and 116, passed by voters in June 1990, triggered state legislation requiring urban counties to designate a countywide public agency, known as a Congestion Management Agency (CMA), to create, manage, and update a countywide CMP. The purpose of a CMP is: (1) to establish level of service standards for designated freeways, state highways, and local arterials; and (2) to maintain or achieve those standards by increasing capacity of designated roads and/or managing travel demand. Incentives for incorporated cities and towns to take part in the CMP include the receipt of additional Proposition 111 gas tax revenue, Proposition 116 bond funds, and State Transportation system management funds, as well as eligibility for state and federal funds under the Regional Transportation Improvement Program (RTIP), as managed by the Metropolitan Transportation Committee (MTC). If a local government fails to comply with the CMP, the CMA may direct the state to withhold funds and declare local projects ineligible for state or federal funding.

For CMP intersections, VTA determined that significant traffic impacts would occur when the addition of project traffic causes:

- operations to deteriorate from LOS E or better under Background Conditions to LOS F under Project Conditions, or
- exacerbation of unacceptable operations (LOS F) by increasing the critical delay by four seconds or more and increasing the V/C ratio by 0.01 or more, or
- an increase in the V/C ratio by 0.01 or more when the change in critical delay is negative at an intersection projected to operate unacceptably under Background and Project Conditions.

City of Santa Clara's Zoning Ordinance

The City of Santa Clara's Zoning Ordinance requires a parking supply of two garage spaces for every single-family dwelling. The City's Zoning Ordinance does not have a separate parking requirement for senior housing development. In approving prior senior housing projects, the City has always granted a parking reduction. Further, density bonus standards for affordable housing development in the City's zoning ordinances would allow exceptions to parking requirements.

Levels of Service

Roadway Levels of Service

In consultation with staff of the City of Santa Clara, County of Santa Clara, and City of San Jose, 16 intersections in the City of Santa Clara and San Jose were selected for evaluation in the Transportation Impact Analysis (Fehr & Peers 2006). The peak-hour turning movement volumes and the existing lane configurations were used to calculate the AM and PM peak-hour levels of service for the 16 study intersections. The results of the existing LOS analysis are presented in Table 4-14 below. Corresponding calculation sheets are contained in Appendix J

(see Appendix C of that report). The reported delays and levels of service represent operations for the intersections as a whole. Specific vehicle movements may operate at better or worse conditions.

City of Santa Clara Intersections

The results of the LOS calculations indicate that the two key intersections located in Santa Clara are operating at acceptable levels (LOS D or better) according to City of Santa Clara standards.

City of San Jose Intersections

The results of the LOS calculations indicate that all 12 of the intersections located in the City of San Jose currently operate at an acceptable level.

Santa Clara County Intersections

The results of the LOS calculations indicate that all county intersections are operating within acceptable standards with the exception of the intersection of Stevens Creek Boulevard and San Tomas Expressway which is currently operating at LOS E+ during the AM peak hours and LOS F during the PM peak hours.

CMP Intersections

Five of the key intersections are designated CMP intersections. One of the five intersections is currently operating at an unacceptable level based on the CMP standard of LOS E or better (i.e., intersection of Stevens Creek Boulevard and San Tomas Expressway is operating at LOS E+ during AM peak and LOS F during PM peak hours).

Existing Freeway Segment Levels of Service

Table 4-15 shows the existing freeway segment levels of service based on the segment densities reported in the VTA's 2002 CMP Monitoring and Conformance Report. Based on the monitored freeway segment densities, the following freeway segments are operating at an unacceptable level of service (LOS F) under Existing Conditions:

- Northbound I-280 – Winchester Boulevard to Saratoga Avenue (AM peak/mixed-flow lanes)
- Northbound I-280 – Meridian Avenue to I-880 (AM peak/mixed-flow lanes)
- Southbound I-280 – I-880 to Meridian Avenue (PM peak/mixed-flow lanes)
- Northbound I-880 – Bascom Avenue to The Alameda (AM peak hour)
- Northbound I-880 – Stevens Creek Boulevard to Bascom Avenue (AM peak hour)
- Northbound I-880 – I-280 to Stevens Creek Boulevard (AM peak hour)

Table 4-14
Existing Intersection Levels of Service

Intersection (Jurisdiction)	Peak Hour	Count Date	Average Intersection Delay [1]	LOS [2]
1. Newhall Street and Winchester Boulevard (CSC)	AM	5/11/04	19.0	B-
	PM	5/11/04	17.8	B
2. Pruneridge Avenue and San Tomas Expressway (County)	AM	5/11/04	41.8	D
	PM	5/11/04	43.7	D
3. Pruneridge Avenue and Saratoga Avenue (CSC)	AM	8/30/05	23.5	C
	PM	8/30/05	26.3	C
4. Pruneridge Avenue/Hedding Street and Winchester Boulevard (CSJ)	AM	5/13/04	32.6	C-
	PM	5/13/04	36.7	D+
5. Hedding Street and Bascom Avenue (CSJ) (Existing configuration)	AM	5/13/04	35.3	D+
	PM	5/13/04	38.0	D+
6. Forest Avenue and Winchester Boulevard (CSJ)	AM	8/30/05	19.9	B-
	PM	8/30/05	25.8	C
7. Forest Avenue/Naglee Avenue at Bascom Avenue (CSJ)	AM	8/30/05	35.6	D+
	PM	8/30/05	43.3	D
8. Dorcich Street and Winchester Boulevard (CSJ)	AM	8/30/05	9.3	A
	PM	8/30/05	14.4	B
9. Stevens Creek Boulevard and Saratoga Avenue (CSJ/CMP)	AM	5/12/04	32.9	C-
	PM	9/29/04	35.0	C-
10. Stevens Creek Boulevard and San Tomas Expressway (County/CMP)	AM	8/30/05	**56.2**	**E+**
	PM	9/30/04	**83.2**	**F**
11. Stevens Creek Boulevard and Winchester Boulevard (CSJ/CMP)	AM	5/11/04	33.3	D
	PM	10/14/04	41.7	D-
12. Stevens Creek Boulevard and Monroe Street (CSJ)	AM	5/12/04	26.2	C
	PM	5/12/04	35.7	D+
13. Stevens Creek Boulevard and Southbound I-880 Off-Ramp (CSJ/CMP)	AM	5/11/04	20.2	C+
	PM	10/5/04	20.3	C+
14. Tisch Way/Northbound I-280 On-ramp and Winchester Boulevard (CSJ)	AM	8/30/05	16.5	B-
	PM	8/30/05	24.2	C
15. Moorpark Avenue and Southbound I-280 Off-Ramp (CSJ/CMP)	AM	6/22/04	19.5	B-
	PM	9/29/04	23.9	C
16. Moorpark Avenue and Winchester Boulevard (CSJ)	AM	5/12/04	37.5	D+
	PM	5/12/04	40.8	D

Notes: Unacceptable operations are highlighted in bold type, based on level of service thresholds of the jurisdiction in which each intersection is located.

CSC = City of Santa Clara intersection
CSJ = City of San Jose intersection
CMP = Designated CMP intersection
County = Santa Clara County intersection

[1] Average stopped delay per vehicle for signalized intersections and average control delay for stop-sign controlled intersections.

[2] LOS = Level of service.

Source: Fehr & Peers 2006

Table 4-15
Existing Freeway Segment Levels of Service [1]

Freeway	Segment	Direction & Lane Type	Peak Hour	No. of Lanes	Volume	Average Speed	Density	LOS [2]
I-280	Winchester to Saratoga	**NB/WB MF**	**AM**	**3**	**5,940**	**33**	**30**	**F**
		NB/WB HOV	AM	1	2,050	64	32	D
		NB/WB MF	PM	3	6,270	41	51	E
		NB/WB HOV	PM	1	740	67	11	A
		SB/EB MF	AM	3	6,300	42	50	E
		SB/EB HOV	AM	1	1,010	67	15	B
		SB/EB MF	PM	3	6,320	43	49	E
		SB/EB HOV	PM	1	2,170	62	35	D
I-280	Meridian to I-880	**NB/WB MF**	**AM**	**3.7**	**4,220**	**10**	**114**	**F**
		NB/WB HOV	AM	1	2,050	36	57	E
		NB/WB MF	PM	3.7	6,590	66	27	D
		NB/WB HOV	PM	1	200	67	3	A
		SB/EB MF	AM	3.7	6,970	65	29	D
		SB/EB HOV	AM	1	1,450	66	22	C
		SB/EB MF	**PM**	**3.7**	**6,890**	**27**	**69**	**F**
		SB/EB HOV	PM	1	2,170	62	35	D
I-880	Bascom to The Alameda	**NB**	**AM**	**3**	**5,760**	**30**	**64**	**F**
		NB	PM	3	5,150	66	26	C
		SB	AM	3	5,350	66	27	D
		SB	PM	3	5,860	31	63	E
I-880	Stevens Creek to Bascom	**NB**	**AM**	**3**	**4,900**	**19**	**86**	**F**
		NB	PM	3	4,950	66	25	C
		SB	AM	3	6,610	58	38	D
		SB	PM	3	6,270	41	51	E
I-880	I-280 to Stevens Creek	**NB**	**AM**	**3**	**5,860**	**61**	**32**	**F**
		NB	PM	3	3,420	67	17	B
		SB	AM	3	4,550	66	23	C
		SB	PM	3	6,050	65	31	D
SR 17	I-280 to Hamilton	NB	AM	3	6,280	66	28	D
		NB	PM	3.4	6,630	65	30	D
		SB	AM	3	4,750	66	24	C
		SB	PM	3	6,430	63	34	D

Unacceptable operating levels are indicated in bold based on established thresholds.

[1] Source of lanes, volumes, and density: VTA's 2002 VTA CMP Database (April 2003).

[2] LOS is based on density.

MF = Mixed-Flow Lanes
HOV = High-Occupancy Vehicle Lane

Source: Fehr & Peers 2006

The remaining freeway segments are operating at LOS E or better, which is the CMP minimum operating standard for freeways and regional roadways.

4.10.2 ENVIRONMENTAL IMPACTS

THRESHOLDS OF SIGNIFICANCE

The project would have a significant transportation impact if it would:

- cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system;
- exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- substantially increase hazards because of a design feature or incompatible uses;
- result in inadequate emergency access;
- result in inadequate parking capacity; or
- conflict with adopted policies, plans, or programs supporting alternative transportation.

In addition to the above thresholds, thresholds for impacts to neighborhood streets have been developed based on research of traffic volume thresholds in other local and state jurisdictions. The methodology used to develop these thresholds is described in the Neighborhood Impact Analysis prepared by Fehr & Peers (September 2005) and is included in Appendix K. The project would result in significant neighborhood traffic impacts if it would:

- cause the average weekday daily traffic volume to exceed 1,500 vpd on a local residential street or 2,800 vpd on a residential collector street; or,
- increase the average weekday daily traffic volume by 150 vpd on any local or residential collector street, regardless of existing volume.

METHODOLOGY

The volume of traffic associated with the project was estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In the first step, the traffic volumes entering and exiting the project site were estimated. In the second step, the directions the trips use to approach and depart from the site were projected. Finally, the trips were assigned to specific street segments and intersection turning movements. Refer to Chapter 3 and Chapter 4 of Appendix K for a detailed description of methodology and background conditions assumed for the project.

IMPACT ANALYSIS

Impact 4.10-1

Construction-Related Impacts. *Construction activities for the project would result in the generation of up to 40 one-way truck trips per day associated with remediation activities and up to 300 one-way vehicle trips per day associated with construction activities. All construction vehicles and construction personnel*

would access the project site from Winchester Boulevard and would park in designated areas on the project site or in appropriate offsite areas designated for parking uses. No on-street parking would occur. The remediation and construction trips would not occur simultaneously as all remediation activities would be completed before project construction. The remediation and construction-related trips would be temporary and would not substantially increase existing roadway traffic volumes. This would be a less-than-significant impact.

Construction of the project would result in short-term increases in traffic on local roadways. Construction activities would require the hauling of equipment and materials to the project site and transportation of employees to and from offsite locations. Construction activities would require up to 150 construction workers that would commute to the site on a daily basis over a period of 24 to 36 months. These construction workers would generate 300 one-way daily trips to and from the project site. Construction vehicles and construction personnel would access the project site from Winchester Boulevard only and would park all vehicles in designated areas on the project site or in appropriate offsite areas designated for parking uses (e.g., parking garage). No construction-related vehicles (i.e., equipment, personal vehicles) would be allowed to park along streets in the surrounding neighborhood. Existing roadway volumes along Winchester Boulevard are approximately 19,400 vehicles per day.

The project would require the excavation and removal of contaminated soils and the importation of clean fill material. Approximately 5,000 to 6,000 cubic yards of contaminated soil would be removed from the site and a similar volume of soil would be brought to the site as clean fill. If the entire soil volume (i.e., 6,000 cubic yard) is required to be imported, it is estimated that the remediation activities would last 1 to 2 months and generate 600 to 720 one-way truck trips over the remediation period. It is likely that no more that 40 truck trips would occur per day over a period of 1 to 2 months. Further, these trips would not occur simultaneously with the construction worker trips because all remediation activities would be completed before construction of project.

The soil excavation, site preparation, and construction-related vehicle and truck trips would be temporary and would cease once the project is constructed. Further, these trips would be less than 4% of existing local roadway traffic volumes. Because these trips would be temporary and would not substantially increase traffic volumes along area roadways, this would be a less-than-significant impact.

Impact 4.10-2

Degradation of Level of Service (LOS) at Intersections. *The project would not substantially increase traffic volumes, delay, or volume-to-capacity ratios at intersections in the project vicinity. Further, traffic associated with the project would not exceed City of Santa Clara, City of San Jose, or CMP thresholds for acceptable traffic conditions. This would be a less-than-significant impact.*

The volume of traffic generated by the project was estimated based on rates in the Trip Generation published by the Institute of Transportation Engineers (ITE) (Sixth Edition, 1997). This document includes trip rates for various land uses and is a standard tool used for

estimating traffic volumes. Additional information on daily trip generation of senior housing developments was obtained from the ITE website (Fehr and Peers 2006). Observations of a representative City of Santa Clara park were conducted to provide supplemental PM peak-hour data for park uses.

The project includes 110 single-family dwelling units, 165 senior units, and a one-acre park. At the time the traffic analysis was prepared, a determination of the final number of single-family dwelling units had not been identified. The traffic analysis undertook a conservative approach to estimate the project-related impacts by assuming a total of 120 single-family dwelling units and 165 senior units on the project site. Therefore, the impacts presented in this section slightly overstate the impacts of the project that would ultimately be implemented. Regardless, appropriate ITE trip generation rates were applied to proposed land uses. The project is estimated to generate 2,159 daily vehicle trips, 121 AM peak-hour trips (36 inbound/ 85 outbound), and 170 PM peak-hour trips (106 inbound/ 64 outbound). Please refer to Appendix J of this RDEIR for a breakdown of project-generated trips by land use type.

Intersection LOS calculations were conducted to evaluate intersection operations under Project Conditions and under the Single-Family Development Option Conditions. The results of the LOS analysis for Background and Project Conditions are summarized in Table 4-16. Please refer to Appendix J of this RDEIR for the LOS calculation sheets (Appendix B) and Background Conditions (Chapter 3).

With the addition of trips associated with the project, the intersection of Pruneridge Avenue and San Tomas Expressway is projected to continue to operate at an unacceptable LOS E during the PM peak hour; however, the project would only increase the volume-to-capacity ratio by 0.002, which is below applicable thresholds. The remaining City of Santa Clara and Santa Clara County (non-CMP) intersections evaluated are projected to operate at LOS B or C during both peak hours, which is acceptable based on City standards. This would be a less-than-significant impact.

The project would not significantly affect traffic conditions at any of the non-CMP City of San Jose intersections. All City of San Jose intersections are projected to continue to operate at LOS D or better during both peak hours under the project. Stevens Creek Boulevard and San Tomas Expressway intersection (a CMP intersection) is located under jurisdiction of Santa Clara County and is projected to continue to operate at LOS F during both peak hours with the addition of project-generated traffic. The project would result in an increased delay of 0.8 seconds in the AM peak hour, a 0.002 increase in the volume-to capacity ratio during AM peak hours, and no change to the volume-to-capacity ratio during PM peak hours, which is less than City of San Jose and CMP thresholds. The remaining key CMP intersections are projected to operate at LOS E or better under project conditions and traffic conditions would not substantially worsen with implementation of the project. This would be a less-than-significant impact.

Table 4-16
Background and Project Intersection Levels of Service

Intersection (Jurisdiction)	Peak Hour	Background		Project			
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Δ in Crit. Delay	Δ in Crit. V/C
1. Newhall Street and Winchester Boulevard (CSC)	AM	19.3	B-	19.3	B-	0.0	+0.003
	PM	18.1	B-	18.2	B-	+0.2	+0.006
2. Pruneridge Avenue and San Tomas Expressway (County)	AM	52.6	D-	52.9	D-	+0.5	+0.002
	PM	60.7	E	61.1	E	+0.5	+0.002
3. Pruneridge Avenue and Saratoga Avenue (CSC)	AM	23.6	C	23.6	C	0	+0.003
	PM	29.1	C	29	C	0	+0.004
4. Pruneridge Avenue/Hedding Street and Winchester Boulevard (CSJ)	AM	35.4	D+	35.5	D+	+0.1	+0.006
	PM	38.2	D+	38.7	D+	+0.8	+0.014
5. Hedding Street and Bascom Avenue (CSJ)	AM	53.2	D	53.6	D-	+2.2	+0.003
	PM	44.3	D	44.6	D	-0.8	+0.003
6. Forest Avenue and Winchester Boulevard (CSJ)	AM	19.9	B-	23.2	C	6.0	+0.047
	PM	26.3	C	27.7	C	2.5	+0.086
7. Forest Avenue and Naglee Avenue (CSJ)	AM	36.3	D+	36.4	D+	+0.1	+0.001
	PM	39.4	D	39.6	D	+0.3	+0.003
8. Dorcich Street and Winchester Boulevard (CSJ)	AM	8.9	A	9.1	A	+0.1	+0.006
	PM	13.8	B	13.6	B	-0.2	+0.007
9. Stevens Creek Boulevard and Saratoga Avenue (CSJ/CMP)	AM	37.0	D+	37.0	D+	0.0	+0.001
	PM	38.3	D+	38.3	D+	0.0	+0.002
10. Stevens Creek Boulevard and San Tomas Expressway (County/CMP)	**AM**	**89.3**	**F**	**89.8**	**F**	**+0.8**	**+0.002**
	PM	**93.2**	**F**	**93.8**	**F**	**0.0**	**0.000**
11. Stevens Creek Boulevard and Winchester Boulevard (CSJ/CMP)	AM	42.2	D	43.9	D	+1.4	+0.014
	PM	49.6	D	50.2	D	+1.7	+0.015
12. Stevens Creek Boulevard and Monroe Street (CSJ)	AM	36.3	D+	36.3	D+	0.0	+0.002
	PM	62.1	E	62.7	E	+0.4	+0.002
13. Stevens Creek Boulevard and Southbound I-880 Off-Ramp (CSJ/CMP)	AM	21.3	C+	21.3	C+	0.0	+0.002
	PM	25.4	C	25.5	C	+0.2	+0.006
14. Tisch Way/Northbound I-280 On-ramp and Winchester Boulevard (CSJ)	AM	18.2	B-	18.2	B-	+0.4	+0.007
	PM	34.9	C-	34.9	C-	+0.1	+0.002
15. Moorpark Avenue and Southbound I-280 Off-Ramp (CSJ/CMP)	AM	19.6	B-	19.6	B-	+0.1	+0.001
	PM	24.5	C	24.6	C	+0.2	+0.004
16. Moorpark Avenue and Winchester Boulevard (CSJ)	AM	38.6	D+	38.6	D+	0.0	+0.002
	PM	41.8	D	41.9	D	+0.2	+0.006

[1] Whole intersection weighted average control delay expressed in seconds per vehicle.
[2] LOS = Level of service.
CSC = City of Santa Clara intersection
CSJ = City of San Jose intersection
CMP = Designated CMP intersection
County = Santa Clara County intersection
Source: Fehr & Peers 2006

Impact 4.10-3

Vehicular Site Access and Onsite Circulation Impacts. *Proposed vehicular circulation routes for the project would adequately serve the onsite housing units. The addition of a project roadway as a new leg could result in potential operational and safety problems at the Winchester Boulevard/Forest Avenue (east) intersection, if the signal remains in its current configuration. This would be a potentially significant impact.*

Access to the project site under the project would be provided via a roadway and driveway on Winchester Boulevard. The roadway would provide full-access to the site with minor modifications to the signal and the intersection. This driveway would form the west leg of the southern portion of the offset intersection. The second driveway would allow right turn only in and out and would be located south of the full access roadway. These access points would provide adequate ingress and egress to the site and could adequately serve project-related traffic volumes under peak hour conditions (Fehr and Peers 2006). This would be a less-than-significant impact.

Winchester Boulevard has an offset intersection with Forest Avenue, with the west leg located approximately 80 feet north of the east leg. The main project site roadway would be located at the southern intersection across from Forest Avenue (east). There is a driveway cut that serves the project site, but is no longer being used. The main project site roadway would be incorporated into the Winchester Boulevard/Forest Avenue intersection to provide full access (i.e., allow both left and right turns) for vehicles entering and exiting the project site with minor modifications to the signal and the intersection. This intersection as it currently exists is projected to operate at an acceptable level of service using the adopted method for analyzing offset intersections (obtained from the City of Santa Clara and the City of San Jose TRAFFIX databases). However, the addition of a new roadway leg to this intersection would add new traffic to this intersection, and could result in operational and safety problems, including increased driver confusion at the shared left-turn/through lanes on Winchester Boulevard. This would be a potentially significant impact.

The conceptual site plan for the project includes an internal connection between the main access roadway and the senior housing facility. The vehicular circulation in the single-family housing development area includes access from Winchester Boulevard along the northern boundary of the project site and a main circular roadway that provides access to the perimeter houses on the property (Exhibit 3-3). North-south alley ways provide access to the cluster of homes in the central portion of the site and to the perimeter circular roadway. Based on evaluation of the proposed internal circulation plan, it appears that onsite circulation plans would be adequate to accommodate project-related traffic (Fehr & Peers 2006). This would be a less than significant impact.

The conceptual site plan for the senior housing portion of the project site would include a north/south roadway that connects to the main access roadway at the Winchester Boulevard/Forest Avenue intersection. This roadway provides perimeter access around the eastern and southern boundaries of the senior housing facility. This roadway also connects to the perimeter roadway of the single family development at the southern boundary of the site. Based on evaluation of the proposed internal circulation plan, it appears that onsite circulation

plans would be adequate to accommodate project-related traffic (Fehr & Peers 2006). This would be a less than significant impact.

Impact 4.10-4

Freeway Impacts. *The vehicle trips on nearby freeway segments would be less than 1% of existing freeway capacities under the project, which is below Santa Clara Valley Transportation Authority (VTA) thresholds. Therefore, this would be a less-than-significant impact.*

The study freeway segments were evaluated to determine if the project would contribute a substantial volume of project-related traffic during the AM and PM peak hours. Table 4-17 presents the capacities for each freeway segment, and the estimated number of trips added to each segment by the project. The results of the analysis indicate that the project would generate vehicle trips that are less than 1% of the capacity of each freeway segment, which is below VTA thresholds. Further, none of these freeway segments would require additional analysis. Therefore, the project's freeway segment impacts would be less than significant.

Impact 4.10-5

Impacts to Emergency Vehicle Access. *The project would provide adequate emergency access to the project site. However, construction vehicles could temporarily obstruct local roadways, which could impair the ability of local agencies to respond to an emergency in the project area. This would be a potentially significant impact.*

Under the project, emergency vehicular access to the senior housing facility would be provided via the roadway and driveway on Winchester Boulevard. Emergency access to the single-family homes would be provided via the main roadway off Winchester Boulevard and via an emergency vehicle-only access gate at Forest Avenue. Emergency access between the single family and senior housing development would be provided by an emergency access only driveway that connects the two developments in the center of the site. Emergency access under the single-family development option would be provided by the roadway and driveway on Winchester Boulevard and via an emergency vehicle-only access gate at Forest Avenue.

Design and siting of all driveways would be done in consultation with the City of Santa Clara Public Works Department, City Fire Department, and City Police Department staff to ensure that the driveways provide adequate access for emergency vehicles (i.e., turning radii, lane width). Because the developers would be required to coordinate with the City Public Works Department, Fire Department, and Police Department to ensure adequate emergency access is provided, this would be a less-than-significant impact.

The majority of project construction would occur in the footprint of the project site; however, construction of proposed intersection improvements and proposed driveways could partially obstruct roadways in the project vicinity. Obstruction of these roadways could block or slow emergency response vehicles traveling on Winchester Boulevard and could adversely affect the response times of emergency response agencies depending on the time of day (i.e., peak hours). This would be a potentially significant impact.

Table 4-17
Freeway Segment Analysis for Project

Freeway Segment	Direction & Lane Type	Peak Hour	No. of Lanes [1]	Capacity [2]	1% of Capacity	Project Trips	Requires Analysis?
I-280 Winchester to Saratoga	NB MF	AM	3	6,900	69	11	No
	NB HOV	AM	1	1,800	18	0	No
	NB MF	PM	3	6,900	69	8	No
	NB HOV	PM	1	1,800	18	0	No
	SB MF	AM	3	6,900	69	5	No
	SB HOV	AM	1	1,800	18	0	No
	SB MF	PM	3	6,900	69	14	No
	SB HOV	PM	1	1,800	18	0	No
I-280 Meridian to I-880	NB MF	AM	4	9,200	92	3	No
	NB HOV	AM	1	1,800	18	0	No
	NB MF	PM	4	9,200	92	10	No
	NB HOV	PM	1	1,800	18	0	No
	SB MF	AM	4	9,200	92	8	No
	SB HOV	AM	1	1,800	18	0	No
	SB MF	PM	4	9,200	92	6	No
	SB HOV	PM	1	1,800	18	0	No
I-880 Bascom to The Alameda	NB	AM	3	6,900	69	8	No
	NB	PM	3	6,900	69	7	No
	SB	AM	3	6,900	69	4	No
	SB	PM	3	6,900	69	11	No
I-880 Stevens Creek to Bascom	NB	AM	3	6,900	69	2	No
	NB	PM	3	6,900	69	2	No
	SB	AM	3	6,900	69	3	No
	SB	PM	3	6,900	69	8	No
I-880 Stevens Creek to I-280	NB	AM	3	6,900	69	5	No
	NB	PM	3	6,900	69	15	No
	SB	AM	3	6,900	69	12	No
	SB	PM	3	6,900	69	9	No
SR-17/I-280 to Hamilton	NB	AM	4	9,200	78	2	No
	NB	PM	4	9,200	78	5	No
	SB	AM	3	6,900	69	4	No
	SB	PM	3	6,900	69	3	No

[1] Source of lanes, volumes, and density: VTA's 2002 VTA CMP Database (April 2003).

[2] Capacity is based on 2,300 vehicles per hour per lane (vphpl) for mixed flow lanes and 1,800 vphpl for HOV lanes.

MF = Mixed-Flow Lanes
HOV = HOV Lane

Source: Fehr & Peers 2006

Impact 4.10-6

Conformity with City Parking Requirements. *The project would provide adequate parking for the proposed single-family residential development in conformance with City parking standards. The senior housing facility proposes one parking space for each residential unit (165 spaces). If the PD zoning process determines that one parking space per senior housing unit is not the appropriate parking standard for this project, this could be a potentially significant impact.*

The City of Santa Clara's Zoning Ordinance requires a parking supply of two garage spaces for every single-family dwelling. The project would provide two-car garages for each single-family housing unit, which would be consistent with the City's parking requirements. The City's Zoning Ordinance does not identify separate parking requirements for senior housing; however, City staff has indicated that provision of one parking space per senior housing unit would be appropriate, subject to obtaining a parking variance from the City before project construction based on the lower automobile ownership and use by seniors. Further, the City has approved an average of about 0.8 spaces per unit for past senior housing projects. None of these projects have resulted in the generation of any major parking complaints from adjacent neighbors (Ordonez, pers. comm., 2005). Parking requirements would be determined through the Planned Development zoning process. The conceptual plan for the senior housing facility includes one space for each residential unit, for a total of 165 spaces. If the PD zoning process determines that one parking space per senior housing unit is not the appropriate parking standard for this project, this could be a potentially significant impact.

Impact 4.10-7

Demand for Public Transportation. *Bus routes that serve the project site have capacity available to serve residents of the project and the development option. This would be a less-than-significant impact.*

The Santa Clara VTA operates fixed route, commuter, and paratransit bus service and LRT in Santa Clara County and was contacted to obtain load factors for the bus routes that serve the project site (Routes 23, 36, and 60). The Santa Clara VTA indicated that all bus routes are operating at load factors of 0.68 (i.e., 68%) or less, as presented in Table 4-18. As a result, all bus routes serving the project site would have adequate capacity to serve residents of the proposed development. This would be a less-than-significant impact.

Table 4-18
Existing Load Factors

Bus Route	Direction	Peak Load	Capacity	Load Factor
23	Eastbound	24	38	0.63
23	Westbound	26	38	0.68
36	Eastbound	7	38	0.18
36	Westbound	9	38	0.24
60	Eastbound	16	38	0.42
60	Westbound	15	38	0.39

Source: Fehr & Peers 2006

Impact 4.10-8

Pedestrian and Bicycle Circulation Impacts. *The project would add pedestrian demand across Winchester Boulevard and would increase demand for bicycle facilities. Specific information on improvements to offsite pedestrian facilities and the project's bicycle facilities is not available at this time. This could be a potentially significant impact.*

According to VTA criteria, the project would result in a significant impact to bicycles and pedestrians if the project conflicts with an existing or planned facility/service or adds demand to one of these modes that is not adequately accommodated by appropriate facilities or services. The project would construct sidewalks and pedestrian paths throughout the development. These sidewalks would provide pedestrian connections in the site, to Winchester Boulevard, and to the park.

The project site is located across Winchester Boulevard from the Valley Fair Transit Center and a shopping center that includes the Valley Fair Mall and a Safeway. The project would increase the number of pedestrians crossing Winchester Boulevard to access local commercial development. Pedestrian improvements would be included with intersection improvements at Winchester Boulevard and Forest Avenue and could accommodate increased pedestrian demand. However, specific information on the design of these offsite facilities is unknown at this time; therefore, the project could result in inadequate access to offsite pedestrian facilities. This would be a potentially significant impact.

The VTA's Bicycle Technical Guidelines recommend providing one Class I bicycle parking space per every 30 park employees and one Class II parking space per 9 park users during peak daylight times of the peak season; however, the City of Santa Clara Parks and Recreation Department would determine the type and number of bicycle facilities required at the project site. Class I bicycle parking includes bike racks or a secure room with key access for regular bicycle commuters. Class II bicycle parking is a bike rack to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. For senior apartments, the Guidelines recommend providing one Class I bicycle parking space per 30 units plus one Class II space per 30 units. For senior housing units the VTAs Bicycle Technical Guidelines recommend providing one Class I and one Class II bicycle parking space per 30 units. Specific information on the project's bicycle and pedestrian facilities is not available at this time. Because the project could result in the inadequate provision of bicycle facilities, this would be a potentially significant impact.

Impact 4.10-9

Neighborhood Impacts. *The project would not cause any of the study area street segments to exceed their total volume threshold, and would not cause the exceedances of the weekday daily traffic volume increase threshold of 150 vehicles per day with or without the recommended Winchester Boulevard/Forest Avenue intersection modifications. Therefore, this would be a less-than-significant impact.*

The transportation analysis evaluated the impacts of the project on roadway capacity and concluded (above) that the project would have less-than-significant impacts on the surrounding roadway system. A neighborhood analysis was conducted, the purpose of which was to

determine whether project-related traffic would constitute a "livability" impact on surrounding neighborhood streets. A copy of this analysis is presented in Appendix K.

The study area for the neighborhood analysis is bounded by Pruneridge Avenue on the north, Stevens Creek Boulevard on the south, Cypress Avenue on the west, and Winchester Boulevard on the east. Existing 24-hour traffic volumes that represent the typical average weekday traffic conditions were gathered and are summarized in Table 4-19 and presented in Table 1 of Appendix K.

Table 4-19
Existing Daily Traffic Volumes

Street	Location	Traffic Volumes (vehicles per day)
Forest Avenue	Jill to Winchester	860
	Henry to Pineview	842
	Doug Lane to Westridge	995
Fernwood Avenue	Winchester to Jill	199
Jill Avenue	Pruneridge to Forest	217
Crestview Drive	Pruneridge to Forest	168
Pineview Drive	Pruneridge to Forest	214
Henry Avenue	Pruneridge to Forest	321
	Dorcich to Cecil	755
Dorcich Street	Henry to Cecil	560
Cecil Avenue	Henry to Dorcich	478
Cypress Avenue	Forest to Cecil	2,037

Source: City of Santa Clara and Fehr & Peers 2005

As described above, the project is estimated to generate 2,159 daily trips and 170 PM peak-hour trips (106 inbound and 64 outbound). The project trips approaching the site from the west on Stevens Creek Boulevard and on Pruneridge Avenue and departing from the site to westbound Stevens Creek Boulevard were assigned to the roadway network in the study area to reflect the potential use of neighborhood streets. The trip assignments were based on the peak period travel time surveys and field review (Fehr & Peers 2005). The results of the travel time surveys indicated that there is no substantial time savings by using alternate travel routes through the neighborhood versus using the more direct arterial routes. Furthermore, during non-peak hours, congestion on the arterials is less than during the PM commute period. Travel times on the arterial routes are likely to be improved during other hours of the day because (1) these routes are more direct, (2) less vehicle queuing at signalized intersections creates more right-turn-on-red opportunities, and (3) actuated traffic signals at major intersections run on shorter cycle lengths when traffic demand is lower, resulting in shorter delays. Based on these results, the analysis assumes a conservatively high usage of neighborhood streets (40 to 50% during the PM peak hour and 10% during an entire day). The estimated trip assignment is presented in Figure 2a of Appendix K for the project with the

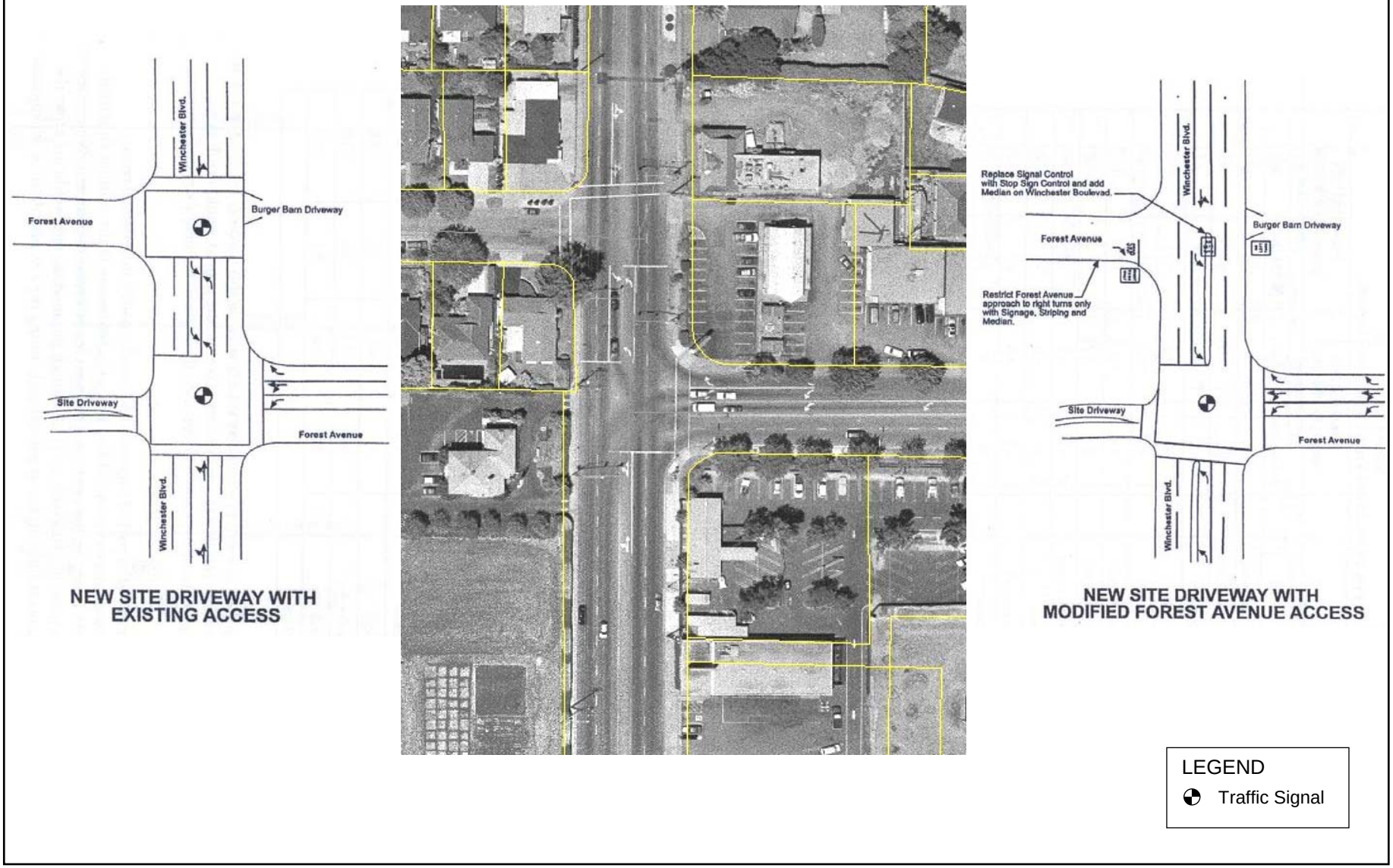
existing signal configurations at the Winchester Boulevard/Forest Avenue intersection (i.e., the primary project access is added as the west leg of the southern Forest Avenue intersection).

Estimated PM peak hour and daily traffic volumes added to neighborhood streets by the project are summarized in Table 4-20. With the existing design of the Forest Avenue/Winchester Boulevard intersection, the greatest projected increase in traffic occurs on the segment of Forest Avenue between Winchester Boulevard and Jill Avenue under the project. The project is projected to result in 11 one-way vehicle trips on this roadway segment during the PM peak hour, which is on average less than one vehicle every 5 minutes. Overall, the project would result in an increase of 15 PM peak-hour trips and 38 daily trips throughout the neighborhood roadway network.

Table 4-20
Project Net Added Traffic by Roadway Segment

Roadway Segment	Project Added Traffic (existing Forest/Winchester intersection design)		Project Added Traffic (proposed Forest/Winchester intersection Design)	
	PM Peak Hour	Daily	PM Peak Hour	Daily
Cypress-Pruneridge to Forest	0	0	0	0
Cypress-Forest to Stevens Creek	+2	+6	+2	+6
Henry-Pruneridge to Forest	0	+2	0	+2
Henry-Forest to Dorcich	+4	+6	+10	+67
Henry-Dorcich to Cecil	+6	+13	+6	+13
Henry-Cecil to Stevens Creek	+8	+19	+8	+19
Pineview-Pruneridge to Forest	0	+2	0	+8
Crestview-Pruneridge to Forest	+2	+3	+3	+15
Jill-Fernwood to Forest	+3	+6	+8	+51
Jill-Pruneridge to Fernwood	+3	+6	+5	+24
Fernwood-Jill to Winchester	0	0	+5	+49
Forest-Cypress to Henry	+2	+6	+2	+6
Forest-Henry to Pineview	+6	+14	0	-47
Forest-Pineview to Crestview	+6	+16	-2	-76
Forest-Crestview to Jill	+8	+19	-3	-114
Forest-Jill to Winchester	+11	+25	-4	-142
Dorcich-Henry to Cecil	+2	+7	+8	+63
Dorcich-Cecil to Winchester	+4	+13	+10	+74
Cecil-Henry to Dorcich	+2	+6	+2	+6

Source: Fehr & Peers 2005



Source: Fehr & Peers, City of Santa Clara 2004

Conceptual Site Access Design and Winchester/Forest Intersection Modification

EXHIBIT 4-11a

Santa Clara Gardens Development Project Recirculated Draft EIR

NOT TO SCALE

NORTH

EDAW

P 3T008.01 12/03

Mitigation recommended as part of Impact 4.10-3 would modify the Forest Avenue/ Winchester Boulevard intersection by adding the project driveway to the existing signalized intersection and restricting the intersection of the west leg of Forest Avenue with Winchester Boulevard to right turns only (Exhibit 4-11a). Table 4-21 presents the change in traffic volumes on neighborhood streets with the intersection modification under the project. Refer to Figure 3a of the Neighborhood Impact Analysis in Appendix K for an illustration of the change in traffic volumes with the proposed Winchester Boulevard/Forest Avenue modification under the project. Figure 4a in Appendix K graphs the change in peak hour and daily volume on each of the street segments with each configuration under the project.

Table 4-21
Change in Total Daily Traffic Volumes with Santa Clara Gardens Project

Street	Location	Existing Volume (vpd)[1]	With Santa Clara Gardens Project and Existing Forest Access			With Santa Clara Gardens Project and Modified Forest Access		
			Added (vpd)	Total (vpd)	% Change	Added (vpd)	Total (vpd)	% Change
Forest Avenue	Jill to Winchester	860	25	558	2.9%	-142	713	-16.5%
	Henry to Pineview	842	14	856	1.7%	-47	795	-5.6%
	Henry to Cypress	995	6	1,001	0.6%	6	1,001	0.6%
Fernwood Avenue	Winchester to Jill	199	0	199	0.0%	49	248	24.6%
Jill Avenue	Pruneridge to Forest	217	6	223	2.8%	51	268	23.5%
Crestview Drive	Pruneridge to Forest	168	3	171	1.8%	15	183	8.9%
Pineview Drive	Pruneridge to Forest	214	2	216	0.9%	8	222	3.7%
Henry Avenue	Pruneridge to Forest	321	2	323	0.6%	2	323	0.6%
	Forest to Cecil	755	13	468	1.7%	67	822	8.9%
Dorcich Street	Henry to Winchester	560	13	573	2.3%	74	634	13.2%
Cecil Avenue	Henry to Dorcich	478	6	484	1.3%	6	484	1.3%
Cypress Avenue	Forest to Cecil	2,037	6	2,043	0.3%	6	2,043	0.3%

[1] vpd= vehicles per day

Source: Fehr & Peers 2006

Although the intersection modification would not affect the project's trip assignment through the neighborhood, during the PM peak-hour, it is projected that 19 vehicles would be diverted to other driving routes (Fehr & Peers 2005). With the intersection modification, vehicle trip

volume reductions on Forest Avenue between Henry Avenue and Winchester Boulevard would occur because vehicles would be diverted to other neighborhood entry and exit paths including: using Stevens Creek Boulevard and turning right on Henry Avenue; turning left onto Dorcich Street and then right on Henry Avenue; turning left on Fernwood Avenue and then left on Jill Avenue to arrive at Forest Avenue; or, turn left on Pruneridge Avenue then left to Jill Avenue, Pineview Drive, or Crestview Drive.

With the project, it is anticipated that there would be a reduction of 0 to 4 vehicle trips during the PM peak hour and 50 to 140 trips on a daily basis. The greatest increase in PM peak-hour traffic (10 one-way trips) would occur on Henry Avenue between Forest Avenue and Dorcich Street and on Dorcich Street between Winchester Boulevard and Cecil Avenue. This represents an increase of approximately 1 vehicle every 6 minutes. The greatest daily increase in vehicle trips (74 one-way vehicle trips) is projected to occur on Dorcich Street between Cecil Avenue and Winchester Boulevard.

The traffic volume increases that occur on some neighborhood streets with the Winchester Boulevard/Forest Avenue intersection modification reflect the redirection of existing neighborhood traffic on Forest Avenue to other streets in the neighborhood, not the addition of new vehicle trips from the project. Overall, the recommended modification would reduce traffic volumes in the neighborhood by shifting some trips to Pruneridge Avenue.

The projected change in peak hour traffic under the project and with or without the Winchester Boulevard/Forest Avenue intersection modification is less than 11 vehicles on any segment in a one-hour period and is considered negligible (Fehr & Peers 2005). Therefore, daily traffic volumes were used to identify potential traffic impacts on neighborhood streets.

The projected changes in daily traffic volumes on neighborhood streets with and without the Winchester Boulevard/Forest Avenue intersection modification were added to existing daily traffic volumes for the study street segments to determine the percent increase in traffic as a result of the project. The change in total daily traffic volumes results for the project are presented in Table 4-21. The total daily traffic volumes for the project are presented in Figure 3a of the Neighborhood Impact Analysis in Appendix K.

The daily traffic volumes on all local street segments, with the exception of Cypress Avenue and Forest Avenue between Henry Avenue and Cypress Avenue, would be less than 1,000 vehicles per day (vpd) under the project and with or without the Winchester Boulevard/Forest Avenue intersection modification. Further, the greatest absolute increase in vehicle trips would be 74 trips on Dorcich Street between Henry and Cecil with the Winchester Boulevard/Forest Avenue intersection modification. The project would not cause any of the study street segments to exceed their total volume threshold (i.e., 1,500 for local streets and 3,000 for connector streets), and would not cause the exceedances on any street of the weekday daily traffic volume increase threshold of 150 vpd with or without the recommended Winchester Boulevard/Forest Avenue intersection modification. Therefore, this would be a less-than-significant impact.

4.10.3 MITIGATION MEASURES

No mitigation measures are necessary for the following less-than-significant impacts.

Impact 4.10-1: Construction-Related Impacts.
Impact 4.10-2: Degradation of LOS at Intersections.
Impact 4.10-4: Freeway Impacts.
Impact 4.10-7: Demand for Public Transportation.
Impact 4.10-9: Neighborhood Impact.

Mitigation is recommended for the following potentially significant impact.

4.10-3: Vehicular Site Access and Onsite Circulation Impacts. The project developers shall coordinate with the City of Santa Clara Public Works Department and the City of San Jose Public Works Department to re-design the traffic signal control of the Forest Avenue (west) intersection with Winchester Boulevard. The redesign could include restricting this intersection to right-turns only (Exhibit 4-11a) so that the developments northerly roadway becomes the west approach to the modified intersection. The project driveway could then be accommodated at the Winchester Boulevard/Forest Avenue (east) intersection in a more typical configuration with fewer conflicting turning movements. With this modification, all of the existing traffic that is currently turning left at the Winchester Boulevard/Forest Avenue (west) intersection would be redirected to other routes, including the intersections of Winchester Boulevard with Pruneridge Avenue/Hedding Street and Winchester Boulevard with Dorcich Street. Traffic modeling for these intersections with the additional project-related trips indicates that all three intersections would operate at acceptable levels. The recommended intersection improvements would result in the Winchester Boulevard intersection with Pruneridge Avenue/Hedding Street continuing to operate at LOS C and D, and intersections of Winchester Boulevard at Forest Avenue (east) and at Dorcich Street are projected to operate at LOS B and C, respectively. An alternate design concept for this improvement is shown in Exhibit 4.11-b. This design would result in the same operational improvements as the option described above and could be constructed within the existing roadway alignment. The City of San Jose shall approve of the traffic re-design for the signal at the Forest (west)/Winchester intersection.

The following design/operational options to the above mitigation measure could be implemented to mitigate this impact. None of these options would require greater right-of-way access than the above intersection improvement.

- Implement the above intersection improvement, except prohibit left turn access from South Winchester Boulevard to the Burger Barn driveway by extending the roadway median island;

Source: Fehr and Peers 2006

Intersection Design Alternative

EXHIBIT 4-11b

- Implement the above intersection improvement and allow left turn access from South Winchester Boulevard to the Burger Barn driveway, and allow left turn access from Forest Avenue to northbound Winchester Boulevard; and
- Implement the above intersection improvement, except create an additional left-turn lane (i.e., restriping or reconfiguration within existing right-of-way) to allow left turn access from northbound Winchester Boulevard to westbound Forest Avenue.

4.10-5: Impacts to Emergency Vehicle Access. The developers shall prepare a Construction Management Plan and submit the plan to the City of Santa Clara Public Works Department and City of San Jose Public Works Department for review and approval. The Construction Management Plan shall identify the timing of construction and the timing of elements that would result in the full or partial blockage of local roadways. The plan shall specify the measures that would be implemented to minimize traffic-related impacts including construction parking during construction, which shall be limited to onsite areas or facilities designated for parking uses (i.e., parking garage). These measures could include, but are not limited to the following: use of signage notifying travelers that they are entering a construction zone, and use of cones, flaggers, and guide-vehicles to direct traffic through the construction zone. A copy of the plan shall be submitted to local emergency response agencies and these agencies shall be notified at least 14 days before the commencement of construction that would partially or fully obstruct local roadways.

4.10-6: Conformity with City Parking Requirements. The senior housing developer shall coordinate with the City of Santa Clara Planning Department to identify the required number of parking spaces for the senior housing development. The developer shall design the senior housing facility to provide the appropriate number of spaces.

4.10-8: Pedestrian and Bicycle Circulation Impacts. The developers shall coordinate with the City of Santa Clara Public Works Department and the Santa Clara VTA to identify the necessary offsite pedestrian and onsite bicycle facilities to serve the proposed development. These facilities shall be incorporated into the project. Pedestrian facilities could include, but are not limited to the following: marked crosswalks, curb cuts, pedestrian signal heads, and signal timing at the intersection of Winchester Boulevard and Forest Avenue. Circulation and access facilities at the proposed park shall include sidewalks that meet American with Disability Act Standards, curb cuts, and signage. Bicycle parking shall conform to VTA standards and shall be located in a high visibility area to encourage bicycle travel and discourage vandalism.

4.10.4 Level of Significance after Mitigation

With implementation of the above mitigation, the project's emergency vehicle access (Impact 4.10-5), parking (Impact 4.10-6), and bicycle and pedestrian impacts (Impact 4.10-8) would be reduced to a less-than-significant level because project developers would be required to prepare appropriate plans and project designs to avoid these impacts.

However, mitigation improvements recommended to reduce the project's vehicular site access impact (Impact 4.10-3) are under the jurisdiction of the City of San Jose and not under the

control of the City of Santa Clara. It is uncertain at this time whether the mitigation improvements would be implemented. If this mitigation measure were not implemented, this would be a potentially significant and unavoidable impact of the project.